

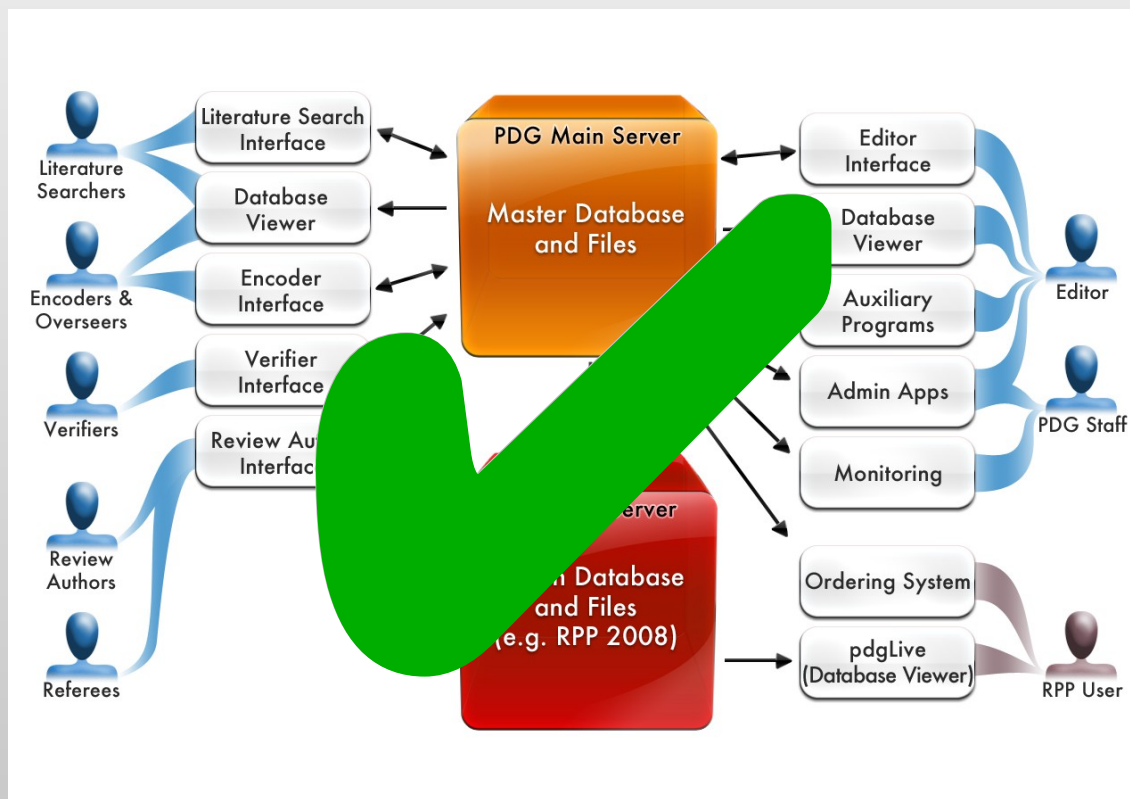
PDG Computing: Status and Future Directions

Juerg Beringer

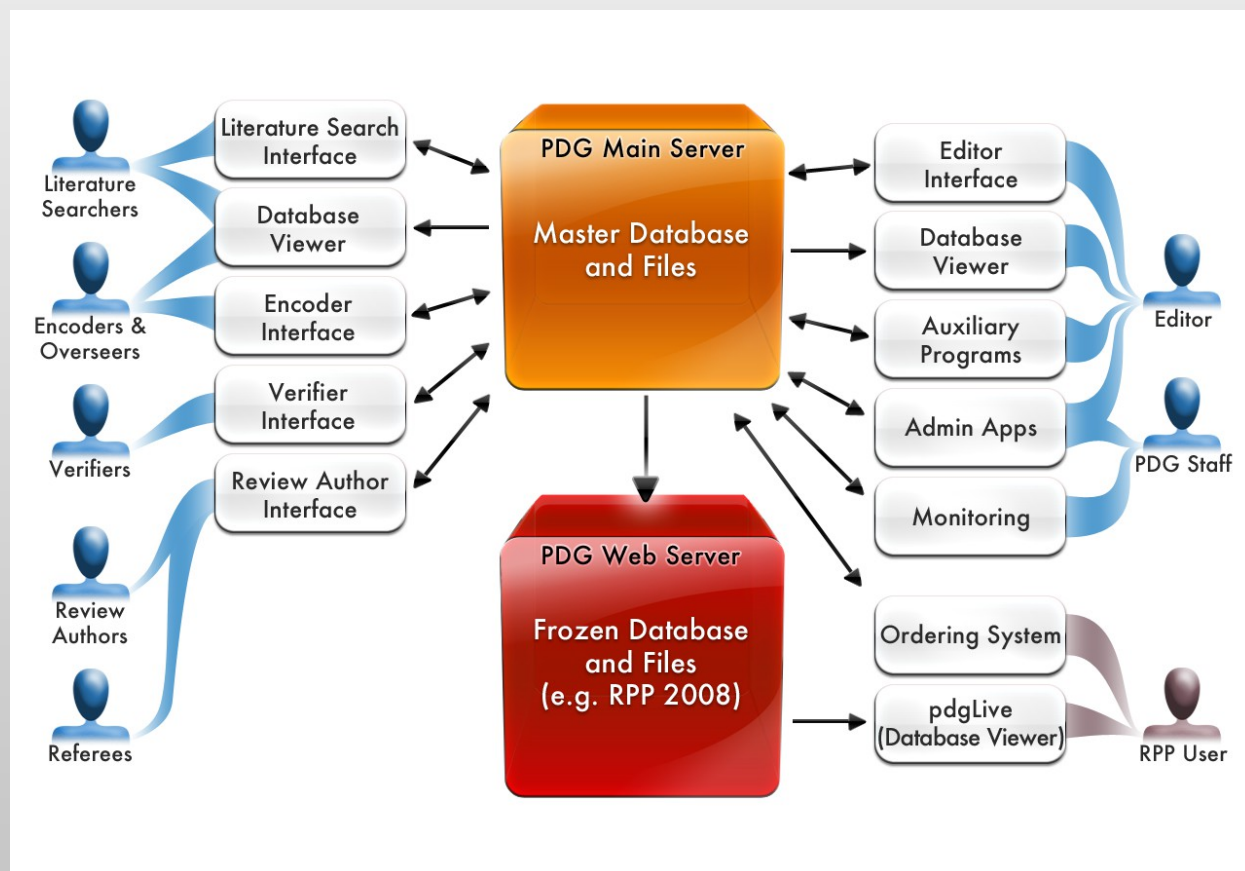
Lawrence Berkeley National Laboratory

- **Summary of PDG Computing Upgrade**
- **(Your) Life with the new Computing System**
- **Discussion of future directions**

Summary of PDG Computing Upgrade



- **Developed and proposed plan for comprehensive upgrade of PDG computing infrastructure in 2007**
 - Primary goal: ensure PDG can continue to function well
 - Support all areas of PDG work, provide platform for future extensions
 - Set of web applications plus command-line production tools



- **Project funded following DOE review of PDG in 2008**
 - 2 FTE for 3 years for development
 - 0.5 FTE (ongoing) for maintenance (starting in FY11)
- **Backbone of new system deployed into production in 2010**
- **DOE review of computing upgrade project on 9/17/2010**
 - “... upgrade is proceeding on schedule and within cost ...”
- **Very positive feedback at PDG meetings in Fall 2010**
- **Presentation/publication at CHEP'2010 (Taiwan)**
- **Had hoped to complete project early (in August 2011)**
 - Unexpected reduction in developer availability from May 2011 onwards meant we had to spread duration over full 3 years
 - Limited use of PdgWorkspace for 2012 edition
- **Project completed on schedule and budget in December 2011**

- All primary / high-priority web applications plus many secondary ones completed
 - Very good progress on further features
- Achieved much more regarding database modernization than thought possible
- Modern, extendable, maintainable and well-documented system
- Will only discuss subset here

Encoding

PDGworkspace Encodina System | Monitoring App |

reference details add measurements toolbox review & sign off

Add New Measurement

Node: Used: ☐ Value: EVTS: CL%: TECH: Charge: Comment:

Feetnote:

Data Block Browser

S086R13 $\Gamma(B^0 \rightarrow \pi^+ \pi^- \pi^0) / \Gamma_{\text{Total}}$

S086R12 $\Gamma(B^0 \rightarrow \eta \pi^0) / \Gamma_{\text{Total}}$

S086R11 $\Gamma(B^0 \rightarrow \eta \pi^0) / \Gamma_{\text{Total}}$

S086R24 $\Gamma(B^0 \rightarrow \phi \pi^0) / \Gamma_{\text{Total}}$

S086R27 $\Gamma(B^0 \rightarrow \phi \pi^0) / \Gamma_{\text{Total}}$

S086R29 $\Gamma(B^0 \rightarrow \phi \pi^0) / \Gamma_{\text{Total}}$

S086R7 $\Gamma(B^0 \rightarrow \pi^+ K^-) / \Gamma_{\text{Total}}$

S086R8 $\Gamma(B^0 \rightarrow K^+ K^-) / \Gamma_{\text{Total}}$

S086R39 $\Gamma(B^0 \rightarrow K^0 \bar{K}^0) / \Gamma_{\text{Total}}$

S086R25 $\Gamma(B^0 \rightarrow \bar{K}^* (892)^0 \rho^0) / \Gamma_{\text{Total}}$

S086R26 $\Gamma(B^0 \rightarrow \bar{K}^* (892)^0 K^* (892)^0) / \Gamma_{\text{Total}}$

S086R28 $\Gamma(B^0 \rightarrow \phi K^* (892)^0) / \Gamma_{\text{Total}}$

S086R16 $\Gamma(B^0 \rightarrow \phi \pi^0) / \Gamma_{\text{Total}}$

Datablock for Node S086R24

Value	CL%	Document ID	TECH	Comment	Actions
<3.20E-4	OUR BEST LIMIT				
<3.20E-4	90.0	ABE 1	2000	SLD	$\pi^+ e^- \rightarrow Z$

*** We do not use the following data for averages, fits, limits, etc ***

1 ABE 0C assumes $B(Z \rightarrow b \bar{b}) = 21.7 \pm 0.3\%$ and the B fractions $f_{B^0} = f_{B^+} = (39.7^{+1.0}_{-1.2})\%$ and $f_{B_s} = (10.6^{+1.1}_{-1.2})\%$

Review authoring

PDGworkspace Ordering Admin App | Monitoring App |

Review Filters

Show: my reviews

Found 9 reviews

Title	Latest version	Finish draft by	Finish refereeing by	Status
Accelerator Physics of Colliders	PDF	2013-08-31	2013-09-30	Published
Free Quark Searches	PDF	2013-08-31	2013-09-30	Published
High-Energy Collider Parameters	PDF	2013-08-31	2013-09-30	Published
Monte Carlo Techniques	PDF	2013-08-31	2013-09-30	Published
Probability	PDF	2013-08-31	2013-09-30	Published
Statistics	PDF	2013-08-31	2013-09-30	Published
tau Branching Fractions	PDF	2013-08-31	2013-09-30	Published
tau-Lepton Decay Parameters	PDF	2013-08-31	2013-09-30	Published
The Top Quark	PDF	2013-08-31	2013-09-30	Published

pdgLive

particle data group

Home pdgLive Summary Tables Reviews, Tables, Plots Particle Listings

New pdgLive (beta version) - please send feedback to pdg-feedback-pdglive@pdg.lbl.gov

2012 Review of Particle Physics.
Please use this CITATION: J. Beringer *et al.* (Particle Data Group), Phys. Rev. D86, 010001 (2012).

Gauge & Higgs Bosons	Leptons	Quarks
Reviews on Gauge & Higgs Bosons	Reviews on Leptons	Reviews on Quarks
γ	e	Light quarks (u, d, s)
gluon	μ	c
graviton	τ	b
W	Heavy Charged Lepton	t
Z	Neutrino Properties	b'
Higgs Bosons	Number of Neutrino Types	f
Heavy Bosons	Double β -Decay	Free quark

Ordering

PDGworkspace

Search:

Country: (if your country is not listed, use this page)

United States of America

Order publications

2012 Review of Particle Physics (Full report, available summer 2012)

2012 Particle Physics Booklet (preliminary report, 2012 report)

2012 Particle Physics Booklet (Short version)

2012-2013 Particle Physics Booklet (preliminary report, 2012)

Edit account information

Contact information

First Name:

Last Name:

Street Address:

City:

State:

Zip Code:

Category:

Account

Username:

Password:

Repeat Password:

Email Address:

Announcements

1 month to receive

2 months to receive

3 months to receive

6 months to receive

1 year to receive

2 years to receive

3 years to receive

5 years to receive

10 years to receive

Never publication announcements (you will not receive PDG ordering announcements in the future)

Monitoring

PDGworkspace Ordering Admin App | Monitoring App |

System status:

- Summary
- Cron jobs

Database changes:

- Summary
- Transaction log
- Transaction details
- SVN diffs

Users:

- Summary
- Details

Listings:

- Summary

Reviews:

- Summary

Debugging:

- Configuration

Status of active encodings by person

Encoding period: 2011-07-01 to 2012-06-30

NOTE: If a person has more than one role for a given encoding (e.g. both overseer and coordinator), only his lowest role is considered.

Assignment status of encoding teams

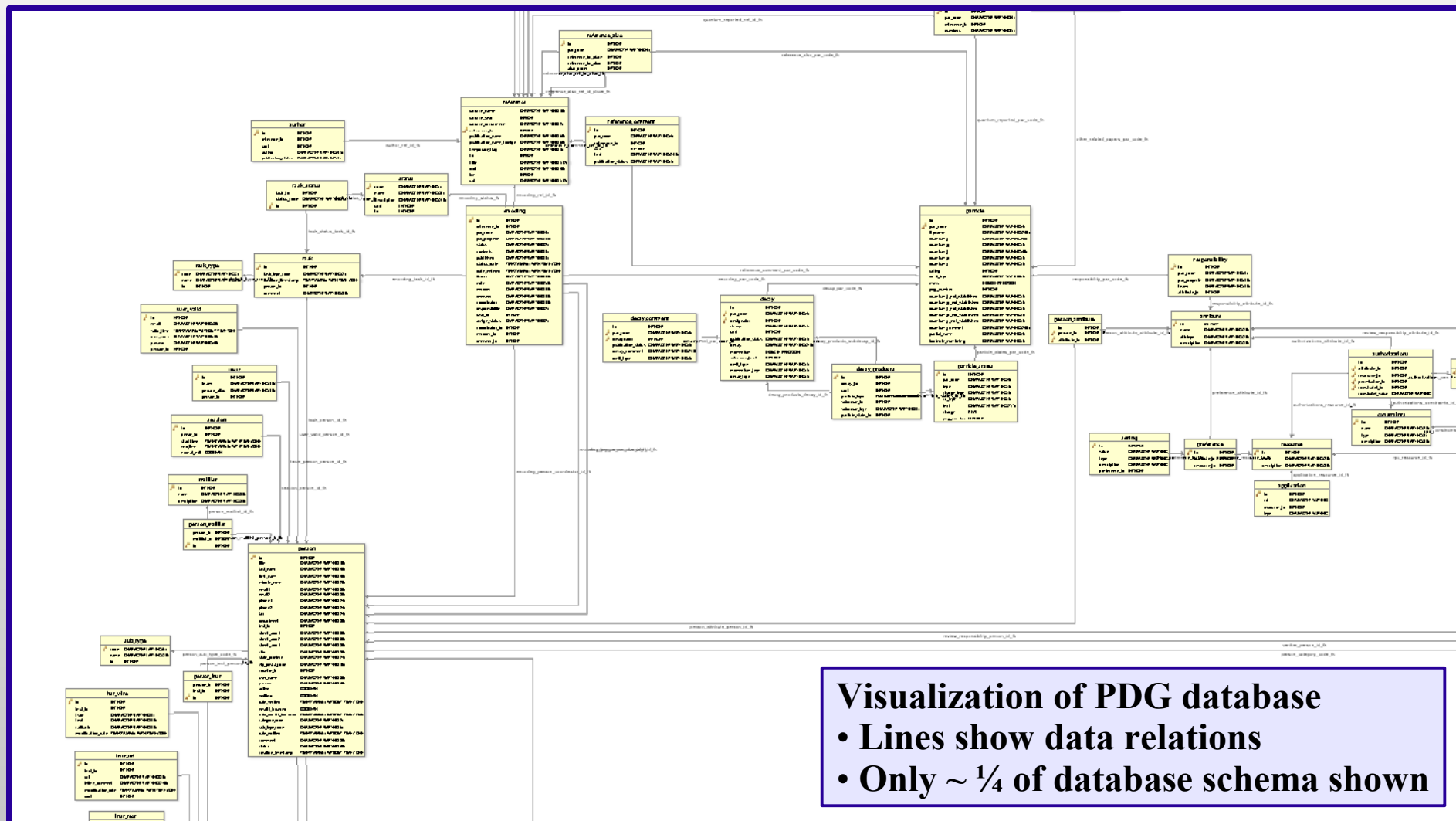
Team	Released encodings	Unassigned encodings
GURTU/GRUN	12	11
MESONTEAM	61	61
MURA/OLIVE	0	0
T-NU-MIX	1	1
VOGEL/PIEP	19	19

Status of Encoders

Status of Overseers

Person	Released Encodings	Completed Encodings	Fraction completed (%)	Comments
Arguin, Jean-Francois	94	0	0	
Barnett, Michael	8	0	0	
CKM-review, CKM-review	0	0	0	

- Large fraction of effort went into modernizing PDG database
 - One of the **most valuable results of the project** in the long term



- **Framework used by all web applications for PDG collaborators**
 - This is your starting point for working with the new system
- **When you log in, you'll see a set of applications tailored to the work you do for PDG**



 **PDG workspace**

Please log in.

user name or email address:

password:

[Forgot user name or password](#)



PDG workspace

[Ordering Admin App](#)


| [Monitoring App](#)

| [Review App](#)

| **Encoding System** |

Juerg Beringer [log out](#)

- Tool for updating the Listings
- Successfully used by Kathy Copic for all her 2012 encodings
 - Even being new to PDG, she **found system very easy to use**
- Gradually invite encoders/overseers to start using new system
 - Kathy Copic is contact person in case of problems



Encoding System | Katherine Copic [log out](#)

Task Filters [reset to defaults](#)

Show for user [advanced filters](#)

Task List - 37 total

Task ^	Paper ⇅	Particle ⇅	Status	Encoder ⇅	Overseer ⇅	Note ⇅
AAD	2011AD	PRL 107 272002	S056	Overseen	Tanabashi	Copic
AAD	2011D	PR D83 112006	S056	Overseen	Tanabashi	Copic
AAD	2011H	PRL 106 251801	S056	Overseen	Tanabashi	Copic
AAD	2011J	PL B700 163	S056	Overseen	Tanabashi	Copic


Encoding System | [Monitoring App](#) |
Piotr Zyla [log out](#)

AAIJ 2011A (PL B698 14)
reference details
add measurements
toolbox
review & sign off
[return to task list](#)

Add New Measurement

Example:
#ref{CAWLFIELD 2006A}
also fits the Dalitz plot
with broad κ^0 π^0
 $K^0 \pi^0$ resonances.

* Node
* Used? ☐
Value
EVTS
CL%
TECN
Charge
Comment

Footnote:


Data Block Browser

S086R13 $\Gamma(B_s^0 \rightarrow \pi^0 \pi^0) / \Gamma_{total}$
S086R12 $\Gamma(B_s^0 \rightarrow \eta \pi^0) / \Gamma_{total}$
S086R11 $\Gamma(B_s^0 \rightarrow \eta \eta) / \Gamma_{total}$
S086R24 $\Gamma(B_s^0 \rightarrow \rho^0 \rho^0) / \Gamma_{total}$
S086R27 $\Gamma(B_s^0 \rightarrow \phi \rho^0) / \Gamma_{total}$
S086R29 $\Gamma(B_s^0 \rightarrow \phi \phi) / \Gamma_{total}$
S086R7 $\Gamma(B_s^0 \rightarrow \pi^+ K^-) / \Gamma_{total}$
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S086R28 $\Gamma(B_s^0 \rightarrow \phi K^*(892)^0) / \Gamma_{total}$
S086R16 $\Gamma(B_s^0 \rightarrow p \bar{p}) / \Gamma_{total}$

Datablock for Node [S086R24](#)

Value ()	CL%	Document ID	TECN	Comment	Actions
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*** We do not use the following data for averages, fits, limits, etc ***					
¹ ABE 0C assumes $B(Z \rightarrow b \bar{b}) = (21.7 \pm 0.1)\%$ and the B fractions $f_{B^0} = f_{B^+} = (39.7^{+1.8}_{-2.2})\%$ and $f_{B_s} = (10.5^{+1.8}_{-2.2})\%$.					

- **Tool for authoring and refereeing review articles**
- **Supports 3 ways for authors to write reviews**
 - **Traditional**: check out tar file of sources, run TeX locally, return revised source files to overseer / editor, who updates them in system
 - **Using subversion (SVN)**: check out source files via SVN, commit changes when ready, run TeX either locally or get PDF file from review authoring system
 - **Online**: edit source files in your browser, no local TeX needed
- **Other features include**
 - Keeps track of review responsibilities, status and deadlines
 - History of changes and “diff” between versions in various forms
 - Links between reviews and related items (reviews, data blocks) in order to improve consistency across RPP
 - Integrated into overall progress monitoring
- **Will be used starting with 2013 review updates**


PDG workspace
[Ordering Admin App](#) | [Monitoring App](#) | **Review App** | [Encoding System](#) |


Juerg Beringer [log out](#)

Review Filters

Show my reviews ▾

Found 9 reviews

Title ▲	Latest version ◆	Finish draft by ◆	Finish refereeing by ◆	Status ◆
Accelerator Physics of Colliders	PDF	2013-08-31	2013-09-30	Published
Free Quark Searches	PDF	2013-08-31	2013-09-30	Published
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tau-Lepton Decay Parameters	PDF	2013-08-31	2013-09-30	Published
The Top Quark	PDF	2013-08-31	2013-09-30	Published


PDG workspace
[Ordering Admin App](#) | [Monitoring App](#) | **Review App** | [Encoding System](#) |


Juerg Beringer [log out](#)

[return to review list](#)

Review: High-Energy Collider Parameters

Details
Get source files
Edit online
History
Change review status

- Used for 2012 edition and found to be very helpful


[Ordering Admin App](#) | [Monitoring App](#) | Juerg Beringer [log out](#)

System status:

- Summary
- Cron jobs

Status of active encodings by person
Encoding period: 2011-07-01 to 2012-06-30

Database changes:

- Summary
- Transaction log
- Transaction details
- SVN diffs

Users:

- Summary
- Details

Listings:

- [Summary](#)

Reviews:

- Summary

Debugging:

- Configuration

- Assignment status of encoding teams
- Status of Encoders
- Status of Overseers

Person	Released Encodings	Completed Encodings	Fraction completed (%)	Comments
Arguin, Jean-Francois	89	89	100	
Barnett, Michael	14	14	100	
Copic, Katherine	37	37	100	
Doser, Michael	86	86	100	
Groom, Don	7	7	100	
Gurtu, Atul	15	15	100	
Hikasa, Ken-ichi	55	55	100	
Lin, Cheng-Ju S	58	58	100	
M_\onig, Klaus	3	3	100	
Milstead, David	2	2	100	
Raffelt, Georg	20	20	100	
Terning, John	8	8	100	
Weiglein, Georg	97	97	100	
Wohl, Charles	82	82	100	
Yao, Wei-Ming	77	77	100	

- Status of Coordinators

System status:

- Summary
- Cron jobs

Database changes:

- Summary
- Transaction log**
- Transaction details
- SVN diffs

Users:

- Summary
- Details

Listings:

- Summary

Reviews:

- Summary

Debugging:

- Configuration

Database table Max number of results

Changes from until

Start and end time can be any legal PostgreSQL date/time specification (for example: today, 2011-02-01 14:00, ...). The table selector shows only tables that have any logging entries.

570 entries found (table limited to maximum of 100 entries):

Logging ID ▾	Timestamp ▴	Task ID ▴	Task type ▴	Person ▴	Trans type ▴	DB User ▴	Comment ▴
6054690	2012-05-18 19:27:16	0	None	None	U	pdgprod	default logging
6054689	2012-05-18 19:27:03	0	None	None	U	pdgprod	default logging
6054688	2012-05-18 19:26:36	0	None	None	I	pdgprod	default logging
6054687	2012-05-18 19:26:36	0	None	None	I	pdgprod	default logging
605066							
605066							

Associated MEASUREMENT data:

WARNING: comparison is with current database contents; there may have been other changes in the mean time.

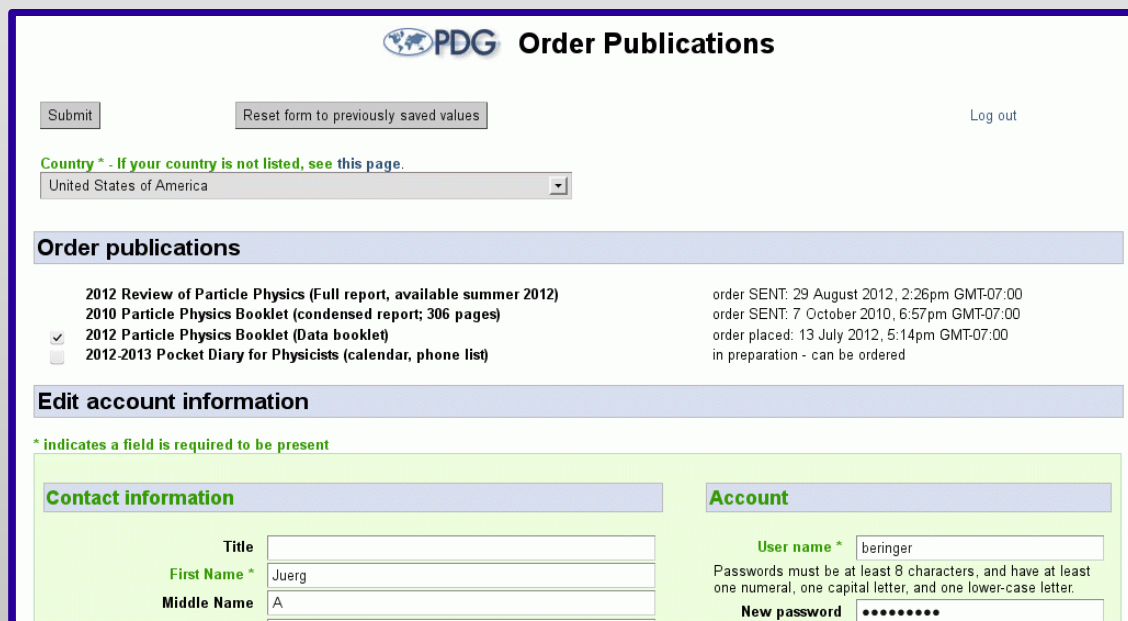
Field	Logging XML data	Current values
id	41463	41463
node	S032AG	S032AG
reference_id	54115	54115
occurrence	1	1
measurement	-5.9 + -5.9 + -2.1	-5.9 + -5.9 + -2.1 E-3
event_count	None	None
confidence_level	None	None

- Same look-and-feel as “old” pdgLive
- Many improvements and new features
 - See next talk for details
- Deployed as “beta version” for RPP 2012, in parallel with old pdgLive
 - Wanted to be cautious, since maintenance person went on maternity leave two weeks before deployment
 - Will become primary version of pdgLive after fixing a few known issues



The screenshot shows the pdgLive website interface. At the top is the PDG logo with the text 'particle data group' and 'Live' in red. Below the logo is a navigation bar with links: Home, pdgLive, Summary Tables, Reviews, Tables, Plots, and Particle Listings. A red banner below the navigation bar reads: 'New pdgLive (beta version) - please send feedback to pdg-feedback-pdglive@pdg.lbl.gov'. Below this is a section titled '2012 Review of Particle Physics.' with the text: 'Please use this CITATION: J. Beringer *et al.* (Particle Data Group), Phys. Rev. D86, 010001 (2012).' The main content area is divided into three columns: Gauge & Higgs Bosons, Leptons, and Quarks. Each column has a 'Reviews on' link and a list of topics. The 'Gauge & Higgs Bosons' column lists: γ , gluon, graviton, W , Z , Higgs Bosons, Heavy Bosons, and Axions. The 'Leptons' column lists: e , μ , τ , Heavy Charged Lepton, Neutrino Properties, Number of Neutrino Types, Double β -Decay, Neutrino Mixing, and Heavy Neutral Leptons. The 'Quarks' column lists: Light quarks (u, d, s), c , b , t , t' , and Free quark. Below these columns are three more sections: Mesons, Baryons, and Other Searches. The 'Mesons' section lists: Reviews on Mesons, Light Unflavored, Further States, Strange, Charmed, Charmed, Strange, Bottom, Bottom, Strange, Bottom, Charmed, $c\bar{c}$, $b\bar{b}$, and Non $q\bar{q}$ Candidates. The 'Baryons' section lists: Reviews on Baryons, N Baryons, Δ Baryons, Exotic Baryons, Λ Baryons, Σ Baryons, Ξ Baryons, Ω Baryons, Charmed Baryons, Doubly-Charmed, and Bottom Baryons. The 'Other Searches' section lists: Reviews on Other Searches, Magnetic Monopole, Supersymmetric Particles, Technicolor, Quark and Lepton Compositeness, Extra Dimensions, and WIMPs.

- Online since May 2011
- Will replace ordering via CERN library a few weeks after CERN ships 2012 booklets and diaries
 - Full statistics & contact info in one place (so far: split LBNL & CERN)
 - CERN will still ship orders for Europe, Africa, ...
- Users can subscribe to PDG mailing list(s)
- For PDG collaborators, same login as for PdgWorkspace



The screenshot shows the 'PDG Order Publications' web interface. At the top, there are 'Submit' and 'Reset form to previously saved values' buttons, and a 'Log out' link. Below this is a 'Country' dropdown menu with 'United States of America' selected. The main section is titled 'Order publications' and lists three items: '2012 Review of Particle Physics (Full report, available summer 2012)', '2010 Particle Physics Booklet (condensed report; 306 pages)', and '2012 Particle Physics Booklet (Data booklet)' (which is checked). To the right of these items, it shows the order status: 'order SENT: 29 August 2012, 2:26pm GMT-07:00', 'order SENT: 7 October 2010, 6:57pm GMT-07:00', 'order placed: 13 July 2012, 5:14pm GMT-07:00', and 'in preparation - can be ordered'. Below the order list is an 'Edit account information' section. It includes a note '* indicates a field is required to be present'. The 'Contact information' section has fields for 'Title', 'First Name' (filled with 'Juerg'), and 'Middle Name' (filled with 'A'). The 'Account' section has a 'User name' field (filled with 'beringer') and a 'New password' field (filled with dots). A note below the password field states: 'Passwords must be at least 8 characters, and have at least one numeral, one capital letter, and one lower-case letter.'

(Your) Life with the New Computing System



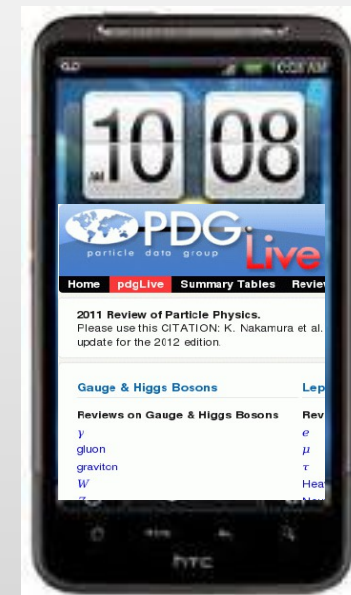
- **Want to **gradually** get collaborators started with new system**
 - Allows to **provide very good support** and fix any problems quickly, if needed
 - When the time comes, **we'll contact you** to start using new system
 - Let us know if you'd like to be among the first users
- **Start inviting encoders, overseers and literature searchers in December**
 - Use new system for 2013 encodings
- **Start inviting review authors in Spring/Summer 2013**
 - In time for next review update

- **Once it's time to start using the new system**
 - We will setup an account for you (unless you've used the ordering system and already created an account there)
 - We will enable this account to use the tools you need (literature search, encoding system, review author system, ...)
- **After that, you can log into PDG Workspace and start working**
 - <https://pdgprod.lbl.gov/PdgWorkspace/>
- **If you need help**
 - Documentation (TWiki): <http://pdgprod.lbl.gov/twiki/bin/view/Pdg/>
 - Each application has a responsible contact person – see Twiki
 - Contact your overseer, Piotr, or me
 - **Please let us know about any problems so that we can fix them!**

Discussion of Future Directions



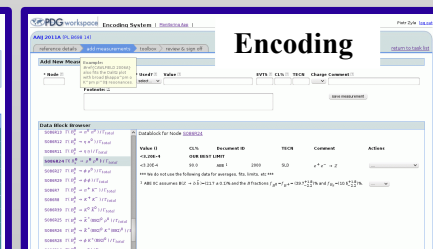
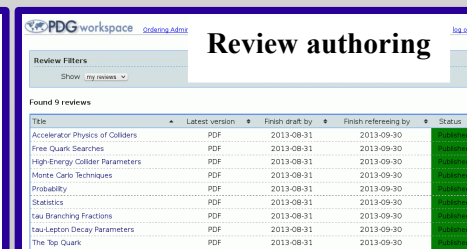
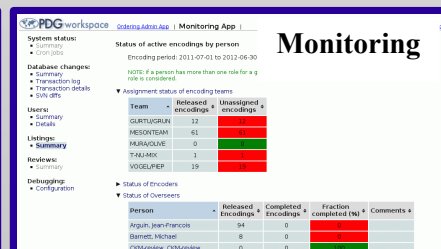
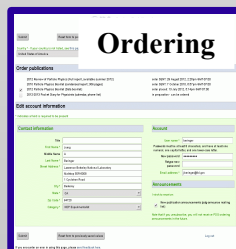
- **New PDG computing system provides solid basis for implementing new features**
 - Realizing substantial new features still requires a development effort
- **Many ideas / requests for new features from PDG**
 - **Smartphone app** – see later talk by Michael
 - **New features for pdgLive** – see next talk
 - **Data entry by collaborations?** - next slide
 - **Download of PDG data in machine-readable format**
 - For individual data blocks (XML, via pdgLive)
 - All PDG data (in a SQLite database)
 - Extending PDG computing platform to support averaging groups?
 - Programmatic access to PDG database outside of PDG collaboration?
 - ...



- **Should we allow the community to enter new results directly into the PDG database?**
 - In particular large collaborations such as LHC experiments
 - A result is best known/understood by its author
 - **PDG would still validate all entries to be published in RPP**
 - Could start with a draft entry rather than just the article
 - Easier to include latest results
 - **In principle, pdgLive, could show user-contributed data in addition to data vetted by PDG**
 - **Users choose whether they want to see user-contributed entries**
 - User-contributed entries could appear online immediately
 - User-contributed data might include unpublished (public) data
 - Fits and averages including user-contributed data possible
 - Should be able to **minimize abuse** by requiring authentication and displaying the identity of contributors

Is this something worth pursuing?

- **PDG Computing Upgrade project successfully completed on schedule and within budget in December 2011**
 - Backbone of new system used in production since summer 2010
 - Encoding interface and monitoring used for producing RPP 2012
- **As a result of this project, PDG now has a solid computing platform on which we can build**
 - Modern, extendable, maintainable and well-documented
- **Gradually inviting collaborators to start using new system**
 - Will allow us to provide very good support and fix problems quickly
- **Discussion about future direction**



Backup Slides



- **Convert ancient legacy software into modern system without disrupting ongoing PDG work**
 - Gradually transform $O(100)$ disconnected data tables into modern relational database with integrity constraints and change tracking
- **Complex distributed workflow with hundreds of users**
- **Correctness of data is paramount**
 - New system produces “identical” manuscript of 1400+ page book
- **Display of math on the web**
- **PDG schedule leaves only few deployment opportunities**
 - Gradual deployment, starting in August 2010

- **Focus and prioritize**
 - Identified technically challenging areas: **database, math display**
 - **Focus on cornerstone of new system**: modern PDG database
 - **Complete primary and difficult applications / middleware first**
 - Secondary applications lower priority than publication-critical ones
 - Remaining secondary web applications small and easy to complete with available resources
- **Avoid scope creep and keep to original goals**
 - Sometimes hard, since new system offers so many exciting opportunities for extension beyond the project's scope
- **Strong involvement from PDG group**
 - Orin Dahl, Piotr Zyla, JB
 - Many others helped with testing

- **Excellent documentation emphasized from beginning**
 - Manuals
 - TWiki
 - Inline code documentation, man pages, help

Public, for PDG collaborators:

TWiki > Pdg Web > WebHome (2011-12-15, Main:beringer) Edit Attach

Welcome to the TWiki of the Particle Data Group

This TWiki provides **information for PDG collaborators** about the new PDG computing system. Other information is available:

- The public PDG web pages can be found at <http://pdg.lbl.gov>.
- For general information about working in the PDG collaboration please refer to the [Encoder Tools section of the PDG web page](#).
- Information for PDG Computing developers can be found in the [Computing TWiki \(protected\)](#).

How to get Started with the New PDG Computing System

The new PDG Computing System supports all activities of the PDG collaboration through a set of web-based tools. Most of these tools are accessed through a single portal called [PdgWorkspace](#). The URL of this portal is:

<http://pdgprod.lbl.gov/PdgWorkspace/>

In order to access [PdgWorkspace](#), you need a PDG web account with a username (typically your e-mail address) and a password. If you ever used the [new PDG ordering system](#), you already have a PDG web account. Otherwise a new one will be created for you. Your PDG web account needs to be authorized and associated with your roles in the PDG collaboration before you can use it to access [PdgWorkspace](#).

The new PDG computing system and the use of [PdgWorkspace](#) are currently being phased in. We will contact each collaborator in due course with information about their PDG web account. However, if you do want to jump right in as soon as possible, you may request the creation and authorization of your PDG web account by contacting [Piotr Zyla](#).

Brief Description of the different tools in PdgWorkspace

When you log into [PdgWorkspace](#), the system knows your role and responsibilities in PDG, and will give you access to the corresponding tools. These tools may include:

- **Encoding Tool:** The encoding tool supports the full encoding cycle for entering new results into the Listings. It is used by Literature Searchers, Encoder, Overseers, and Coordinators.
- **Review Author Tool:** The review author tool supports the authoring of review articles. It is used by review authors, review coordinators and referees (*deployed starting summer 2012*).
- **Monitoring Tool:** The monitoring tool is a comprehensive tool for monitoring the status of PDG work as well as the new computing system itself.
- **Administrative tools:** Various administrative tools support different tasks such as managing the ordering system, creating user accounts, etc.

Frequently Asked Questions (and Answers)

- **I didn't find what I need - where can I get help?** Depending on what you're looking for, please contact one of the persons listed below:
 - Questions about how to encode something for the Listings: [Piotr Zyla](#)
 - Technical questions about PdgWorkspace: [Sarah Poon](#)
 - Technical questions about the PDG ordering system: [Sarah Poon](#)
 - Special requests regarding ordering of PDG products: pdgrequest@lbl.gov
 - General questions, or if you are unsure whom to ask: [Juerg Beringer](#)

Protected, for developers:

TWiki > Computing Web > WebHome (2011-12-22, Main:beringer) Edit Attach

PDG Computing Upgrade

Meetings and Communication

- **Meetings:** As needed, will be announced on our computing mailing list (see below). Minutes (where available) can be found [here](#).
- **Mailing lists:** We use the mailman mailing list computing@pdg.lbl.gov for general e-mail and discussions related to PDG computing. You can subscribe/unsubscribe to this list at <http://pdg.lbl.gov/mailman/listinfo/computing>. An [archive of past messages](#) is available. For other mailing lists, please see [MailingListOverview](#).

Computing Upgrade Phase 2 (2008-2011)

General information:

- [Project plan and ToDo List](#)
- [High level requirements document](#)
- [Use Cases and Design documents](#)
- [Overview of technologies](#)
- [PDG Identifiers](#)
- [Tests, demos and Tutorials](#)
- [Talks, Proceedings and Publications](#)

System setup, installation, and administration:

- [Software Releases](#)
- [Software installation and procedures for deploying releases and updates](#)
- [Development Environment](#)
- [Setup of PDG servers](#)
- [Backups](#)
- [Migration from CVS to SVN code repository](#)
- Project(s) in SVN: [SysMan](#), [BuildTools](#)

PDG database:

- [RedBook \(version for current production databas\)](#)
- [Detailed database information](#)
- [Wish list for future database changes](#)
- Project(s) in SVN: [Database](#)

Middle layer (API, database access, macro processing):

- [Java API](#)
- [Python API](#)
- Project(s) in SVN: [JavaApi](#), [JavaDao](#), [PyApi](#)
- Docs from nightly build: [PyApi](#)

PDG workspace:

- [Framework and plugin design for PDG workspace](#)
- [Tomcat Webapps](#)
- [PDG Workspace](#)
- [Demoinfo](#)
- [EncodingSystemTaskData](#)

- **Hands-on involvement of PDG personnel ensures excellent knowledge of new system from start**
- **Schema migration tutorial/exercise on 12/21/2011**
 - Using a copy of the new system locally installed on our laptops, successfully modified the database schema, updated all necessary software components, and recompiled everything
- **Sarah Poon retained as maintenance person**
 - On maternity leave since 6/13/2012
- **Other developers still accessible at LBNL if needed**

- **Juerg Beringer (PDG physicist)**
 - Project leader, requirements, system architecture
- **Chuck McParland (computer scientist)**
 - Java API
- **Sarah Poon (computer systems engineer)**
 - Web design, user interfaces, JavaScript
- **David Robertson (computer systems engineer)**
 - Database, Python API, scripts
- **Orin Dahl (PDG physicist, retired)**
 - Legacy Fortran programs
- **Piotr Zyla (PDG editor)**
- **Contributions from Jacob Andreas, Cecilia Aragon, Keith Beattie, Igor Gaponenko, Keith Jackson, Kirill Lugovsky, Slava Lugovsky**

Each member of the team has many years of software development experience

```

from PDG Nightly Builds <pdg-build@george.lbl.gov>★
subject PDG nightly build report
to PDG Build list <pdg-build@george.lbl.gov>★

pdg-job-runner.sh: Wed May 30 04:01:01 PDT 2012 starting...


success pdgbuild-recreate.sh in 112 secs
success python.sh in 4 secs
success JavaApi in 39 secs
success JavaDao in 24 secs
success AuthApi in 25 secs
success JavaModels in 23 secs
* failure PdgWorkspace (1) in 32 secs
success OrderingApp in 29 secs

See http://pdg6.lbl.gov/cgi-bin/pdg-monitor.cgi for details
pdg-job-runner.sh: Wed May 30 04:05:50 PDT 2012 done.
  
```

```

[WARNING] /home/pdgbuild/pdgbuild-work/PdgWorkspace/src/main/java/pdg/workspace/helpermodels/EncodingTask.java:39: warning: - @return tag has no arguments.
[WARNING] /home/pdgbuild/pdgbuild-work/PdgWorkspace/src/main/java/pdg/workspace/ext/BranchingRatioFormatter.java:58: warning: - @param argument "s" is not a parameter name.
[INFO] [resources:resources {execution: default-resources}]
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Copying 0 resource
[INFO] [compiler:compile {execution: default-compile}]
[INFO] Compiling 39 source files to /home/pdgbuild/pdgbuild-work/PdgWorkspace/target/classes
[INFO] -----
[ERROR] BUILD FAILURE
[INFO] -----
[INFO] Compilation failed
[INFO] /home/pdgbuild/pdgbuild-work/PdgWorkspace/src/main/java/pdg/workspace/ext/StringFormatter.java:[128,49] cannot find symbol
symbol : method getDisplayText()
location: class pdg.macro.util.displayPrimitive.DisplayMeasurementTex

[INFO] -----
[INFO] For more information, run Maven with the -e switch
[INFO] -----
[INFO] Total time: 28 seconds
[INFO] Finished at: Wed May 30 04:05:20 PDT 2012
[INFO] Final Memory: 59M/981M
[INFO] -----
building done.
  
```


PDG workspace
[Ordering Admin App](#) | [Monitoring App](#) | [Encoding System](#) |

Juerg Beringer [log out](#)

Literature Search

	Journal Reference ex) PL B686 101	Author ex) BATLEY	Year ex) 2010	Particle(s) ex) S010,S014	Note ex) NA48/2
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